

REMARKS

Favorable reconsideration is respectfully requested in light of the following remarks, wherein Claims 1, 7 and 10 are amended. Currently, Claims 1-15 are pending.

Claims 1, 3, 4 and 7-8 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,164,648 to *Kita et al.* in view of U.S. Patent No. 5,211,115 to *Maier et al.* and further in view of U.S. Patent No. 6,317,671 to *Tsutsui et al.*

As an initial matter, Applicant expresses gratitude to Examiner Kong for the courtesies granted Applicant's attorney during the recent interview. During the interview, certain amendments to Claim 1 were discussed, which amendments the Examiner agreed appeared to define the claims over the applied references.

In particular, independent Claim 1 is amended to recite that the mine vehicle collides with the obstacle and that the driving power of the mine vehicle is stopped... "as a result of the tractive resistance caused by the obstacle resisting the proceeding of the mine vehicle after collision". Claims 7 and 10 are amended to be consistent with these features. Support for the amendments can be found in paragraph [0018], lines 8-10 and in paragraph [0009], lines 5-7.

As discussed during the interview, none of the references, in combination or alone, disclose the patentable features of independent Claims 1, 7, and 10. For example, as conceded by the Examiner, *Kita et al.* fails to disclose driving intentionally against a stationary obstacle. Moreover, *Kita et al.* fails to disclose that mine vehicle collides with the obstacle and that the driving power of the mine vehicle is stopped... "as a result of the tractive resistance caused by the obstacle resisting the proceeding of the mine vehicle after collision".

The Examiner seeks to rely upon *Maier et al.* for disclosing the feature of the mine vehicle

colliding with the obstacle. However, *Maier et al.* discloses a transporting vehicle that is driven in a stopping area provided with a signal strip (16) arranged on a travel path of the vehicle, column 3 lines 41-45, and Figure 2. The stopping area is also provided with a barrier (17) at the end of the signal strip (16). As it is mentioned in column 3, lines 51-57, the vehicle detects the signal strip and continues driving at the end of the strip as long as a switch (19) arranged at a bottom of the vehicle is actuated by the barrier (17). The vehicle is stopped when the switch (19) transmits a signal to a microcomputer. Thus, *Maier et al.* teaches to drive an electronic switch against a barrier. The stopping of the vehicle has nothing to do with the tractive resistance caused by the collision. Accordingly, *Maier* fails to disclose the feature that the driving power of the mine vehicle is stopped... “as a result of the tractive resistance caused by the obstacle resisting the proceeding of the mine vehicle after collision”, as now provided in independent Claim 1.

Finally, *Tsutsui et al.* does not make up for the foregoing deficiencies of *Maier* and *Kita et al.* In particular, *Tsutsui et al.* fails to disclose any collision against any physical obstacle and stoppage of the vehicle on the basis of the tractive resistance caused by the collision. Instead *Tsutsui et al.* teaches to predict when the vehicle will stop, column 1, lines 45-47 and 57-59. Accordingly, neither *Kita et al.*, *Maier et al.* nor *Tsutsui et al.*, in combination or alone, disclose the patentable features of independent Claims 1 and 7, since none of these documents discloses monitoring the speed of the driving power transmission when driving intentionally against a stationary obstacle and means for stopping the driving power when the tractive resistance increases above a limit value due to the intentional collision.

The Examiner refers also to *Kushi et al.* and states that it discloses stopping the driving power of the vehicle when tractive resistance is increased. However, *Kushi et al.* discloses a

traction control system in which the occurrence of tire slippage is detected and the output torque of an engine is reduced by influencing the fuel fed. The system determines the number of cylinders in which the supply of fuel is to be stopped in order to achieve the needed reduced torque, column 2, lines 9-12. *Kushi et al.* does not teach stopping of the driving power when the tire slippage occurs, but on the contrary, it relates to the traction control system, the purpose of which is to improve grip of the tires and thereby cause better tractive force. As such, neither *Kita et al.*, *Maier et al.*, *Tsutsui et al.* nor *Kushi et al.*, in combination or alone, disclose the features of independent Claim 10, since none of these documents discloses monitoring the speed of the driving power transmission when driving intentionally against a stationary obstacle and means for stopping the driving power when the tractive resistance increases above a limit value due to the intentional collision.

For at least the foregoing reasons, it is submitted that the system and method of independent Claims 1, 7, and 10, and the claims depending therefrom, define patentable subject matter over the applied documents. Accordingly, withdrawal of the rejections of record and allowance of this application are earnestly solicited.

Should any questions arise in connection with this application, or should the Examiner believe a telephone conference would be helpful in resolving any remaining issues pertaining to this application, it is respectfully requested that the undersigned be contacted at the number indicated below.

EXCEPT for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required,


including any required extension of time fees, or credit any overpayment to Deposit

Account 50-0573. This paragraph is intended to be a CONSTRUCTIVE PETITION FOR
EXTENSION OF TIME in accordance with 37 C.F.R. § 1.136(a)(3).

Respectfully Submitted,

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